

INL News Release

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**Colorado School of Mines first to use nuclear energy research partnership**

IDAHO FALLS --Under a research partnership between the Advanced Test Reactor National Scientific User Facility (ATR NSUF) at Idaho National Laboratory and Massachusetts Institute of Technology, a Colorado School of Mines nuclear materials irradiation experiment will be the first test conducted in the MIT Reactor (MITR), a 5 megawatt research reactor.

NSUF Scientific Director Todd Allen notified the Colorado school's Department of Metallurgy and Materials Engineering of the experiment's selection on July 7.

Under the partnership, test space can be offered to users in the ATR at INL or the reactor at MIT. A new call for university experiments in the Advanced Test Reactor NSUF will be released later this year.

"This partnership arrangement increases opportunities for reactor testing and provides the NSUF greater flexibility to respond to user needs," Allen said.

The Colorado experiment will be, "Advanced Nondestructive Assessment Technology to Determine the Aging of Silicon-Containing Materials for Generation IV Nuclear Reactors."

"We at the Colorado School of Mines see this partnership as a tremendous advantage in allowing our students in the nuclear materials program to get hands-on experience with the tools and procedures involved with the nuclear reactor industry," said Prof. David Olson, Department of Metallurgy and Materials Engineering. "This project on the nondestructive electronic property measurements of high-temperature structural materials to assess radiation induced aging has a high potential of introducing advanced assessment tools to the nuclear industry. We look forward to further developing our partnership and hope other universities also take advantage of this wonderful opportunity."

NSUF test space at both reactors is made available at no cost to external users whose projects are selected through a peer review process. The partnership with MITR is the first in an expected series of national partnerships designed to enhance the NSUF infrastructure and capability.

The U.S. Department of Energy created the ATR NSUF in April 2007 with the hopes of asserting U.S. leadership in nuclear science and technology and attracting new users -- universities, laboratories and industry -- to conduct research at the ATR and its partner facilities.

The capability of the MITR to operate in-core experiment facilities at temperatures up to 1,600 degrees Centigrade allows researchers to replicate nuclear power reactor conditions and study the behavior of advanced materials and fuel designs for next generation nuclear reactors.

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